

DETAILED ACTION

1. Claims 20-41 are presented for examination. Applicant filed an amendment on 1/15/2010 amending claims 28 and 40. In view of Applicant's amendment, the Examiner withdraws the ground of rejection of claims 1-6 under 35 U.S.C. 112 second paragraph, however, new grounds of rejection of claim 41 under 35 U.S.C. 112 second paragraph necessitated by applicant's amendment is established and the examiner has maintained the grounds of rejection of claims 20-40 under 35 U.S.C. 103 as set forth in detail below.

Response to Arguments

2. Applicant's arguments filed 1/15/2010 have been fully considered but they are not persuasive.

3. Applicant argues that Honarvar does not disclose that the determining step, or element, is automatically performed. The examiner disagrees. Honarvar discloses "automatically optimizing a strategy of a decision management system" (Honarvar, abstract) and "In step 610, the optimization is performed. After optimization in step 610, the operation moves to step 612 where the results of the optimization are analyzed" (Honarvar, col. 16 line 4-6). From "automatically optimizing a strategy of a decision management system", one of ordinary skill in the art can confirm that the performing of the optimization is automatically done, and from "In step 610, the optimization is performed. After optimization in step 610, the operation moves to step 612 where the results of the optimization are analyzed", one of ordinary skill in the art can confirm that

the results of the optimization has been "determined" in the performing optimization step (610) in order for the results to be analyzed in step 612.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 41 is vague and indefinite. Claim 41 recites the limitation "an influence exercised on one of the one or more process parameters by the more than at least one optimization entity may not exceed 100 percent". What does this "100 percent" mean? Is the 100% of the process parameter or of the optimization entity? For the purpose of this examination, the examiner has interpreted the limitation "an influence exercised on one of the one or more process parameters by the more than at least one optimization entity may not exceed 100 percent" as "an influence exercised on one of the one or more process parameters by the more than at least one optimization entity".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 20-24, 26, 30, 38-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 20030120528 to Kruk et al. (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar").

As per claim 20, Kruk substantially discloses:

- ***at least an optimization entity for influencing at least a process parameter*** (Kruk, [0120]), where "which products and/or services to purchase from which suppliers" is the optimization entity as claimed.
- ***at least a monitoring entity for monitoring entity for monitoring the process parameter*** (Kruk, [0009]);
- ***at least an evaluation entity for determining an optimization of the process parameter, wherein the optimization is effected by the optimization entity*** (Kruk, [0120] and [0181]).

Kruk is silent regarding ***automatically determining an optimization***. However, Honarvar in an analogous art discloses ***automatically determining an optimization*** (Honarvar, abstract and col. 10 line 22-25).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

As per claim 21, the rejection of claim 22 is incorporated, Kruk further discloses the process parameter which must be optimized, and which is

influenced by the optimization entity (Kruk, [0120]), where "the total cost associated with a procurement process" is the process parameter as claimed, ***is assigned an evaluation entity such that the optimization which is effected on the process parameter by the optimization entity can be determined by the evaluation entity*** (Kruk, [0181]), ***in real time*** (Kruk, [0134]), ***online*** (Kruk, [0075] and [0097]).

As per claim 22, the rejection of claim 20 is incorporated, Kruk further discloses the evaluation entity has at least one evaluation module for determining an optimization of a corresponding process parameter, wherein the optimization is effected by a specific optimization entity (Kruk, [0120], [0180] and [0181]), where "which products and/or services to purchase from which suppliers" is the specific optimization entity as claimed.

Honarvar further discloses ***automatically determining an optimization*** (Honarvar, abstract and col. 10 line 22-25).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

As per claim 23, the rejection of claim 22 is incorporated, Kruk further discloses the evaluation module is used for determining a cost saving which is

effected in relation to a relevant process parameter (Kruk, [0120], [0180] and [0181]).

Honarvar further discloses ***automatically*** (Honarvar, abstract and col. 10 line 22-25).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

As per claim 24, the rejection of claim 22 is incorporated, Kruk further discloses evaluation modules in an evaluation entity which is assigned to a process parameter (Kruk, [0120], [0180] and [0181]). ***Optimization entities which influence the process parameter concerned*** (Kruk, [0120]). ***number of modules is dependent on the number of entity*** (Kruk, [0042]), where "scanning module 50....Optical character recognition module 54 is operable..." inherently shows that the number of modules is dependent on the number of entity, because while one module is assigned to just one entity, there has to be more modules if there are a number of different entity.

As per claim 26, the rejection of claim 20 is incorporated, Kruk further discloses all evaluation entities are connected to an overall evaluation entity, such that the effected overall optimization of all process parameters can be

determined by the overall evaluation entity (Kruk, [0178], Fig. 15 element 602, [0192], and [0195]).

Honarvar further discloses **overall optimization of all process parameters** (Honarvar, col. 5 line 11-14 and col. 5 line 61-62).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

As per claim 30, the rejection of claim 20 is incorporated, Kruk further discloses a display entity for visualizing the effected optimization of the process parameter or for visualizing the effected overall optimization of all process parameters (Kruk, [0178], Fig. 15 element 602, [0191], [0192], and [0195]).

Claims 38-39 are method claims corresponding to the device claims 20-21 respectively and therefore are rejected under the same reasons set forth in rejections of claims 20-21.

As per claim 41, the rejection of claim 38 is incorporated, Kruk further discloses more than the at least one optimization entity optimizes one or more process parameters (Kruk, [0120]), **an influence exercised on one of the one or**

more process parameters by the more than at least one optimization entity (Kruk, [0120]).

8. Claims 25 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 20030120528 to Kruk et al. (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), further in view of US 6004579 to Bathurst et al. (hereinafter "Bathurst").

As per claim 25, the rejection of claim 22 is incorporated, Kruk further discloses evaluation module proved optimization values as output values (Kruk, [0180], [0181], Fig. 15, [0192], and [0195]). ***allowing recording of the optimization which is effected for relevant process parameter by each optimization entity*** (Kruk, Fig. 15, [0192], and [0195]).

Honarvar further discloses ***time-related value*** (Honarvar, col. 6 lines 48-54).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

Neither Kruk nor Honarvar but Bathurst in an analogous art discloses ***absolute optimization value*** (Bathurst, col. 15 line 37-40).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Bathurst into the

combination of devices of Kruk and Honarvar. The modification would be obvious because one of the ordinary skill in the art would want to achieve the absolute optimization (Bathurst, col. 15 line 37-40).

As per claim 40, the rejection of claim 38 is incorporated, Kruk further discloses the effected optimization of all process parameters is determined online and/or in real time (Kruk, [0178], Fig. 15 element 602, [0192], [0194], and [0195]).

Honarvar further discloses ***optimization of all process parameters*** (Honarvar, col. 5 line 11-14 and col. 5 line 61-62), ***time-related value*** (Honarvar, col. 6 lines 48-54).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

Neither Kruk nor Honarvar but Bathurst in an analogous art discloses ***absolute quantity*** (Bathurst, col. 15 line 37-40).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Bathurst into the combination of devices of Kruk and Honarvar. The modification would be obvious because one of the ordinary skill in the art would want to achieve the absolute optimization (Bathurst, col. 15 line 37-40).

9. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 20030120528 to Kruk et al. (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), further in view of US 20010017023 to Armington et al. (hereinafter "Armington").

As per claim 27, the rejection of claim 20 is incorporated, neither Kruk nor Honarvar but Armington in an analogous art discloses at least one time normalization entity is provided for normalizing time quantities (Armington, [0145]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Armington into the combination of devices of Kruk and Honarvar. The modification would be obvious because one of the ordinary skill in the art would want to achieve the absolute optimization (Bathurst, col. 15 line 37-40).

10. Claim 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 20030120528 to Kruk et al. (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), further in view of US 5402519 to Inoue et al. (hereinafter "Inoue").

As per claim 28, the rejection of claim 20 is incorporated, Kruk further discloses all process quantities which are used by all entities (Kruk, [0178], Fig. 15 element 602, [0192], and [0195]).

Neither Kruk nor Honarvar but Inoue in an analogous art discloses ***at least one process-quantity normalization entity is provided for normalizing*** (Inoue, col. 26 lines 61-62).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Inoue into the combination of devices of Kruk and Honarvar. The modification would be obvious because one of the ordinary skill in the art would want to provide a system for learning or recalling optimized objects for learning/recalling (Inoue, col. 4 lines 10-12).

As per claim 29, the rejection of claim 28 is incorporated, Inoue further discloses the process-quantity normalization entity is used for normalizing variables or parameters (Inoue, col. 26 line 12-13 and col. 26 line 61-68).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Inoue into the combination of devices of Kruk and Honarvar. The modification would be obvious because one of the ordinary skill in the art would want to provide a system for learning or recalling optimized objects for learning/recalling (Inoue, col. 4 lines 10-12).

11. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 20030120528 to Kruk et al. (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), further in view of US 20030061225 to Bowman et al. (hereinafter "Bowman").

As per claim 31, the rejection of claim 30 is incorporated, Kruk further discloses the display entity depicts the effected optimization of each individual process parameter online or in real time (Kruk, [0178], Fig. 15 element 602, [0191], [0192], [0194] and [0195]); ***display simultaneously*** (Kruk, Fig. 15), where the savings for supplier A, supplier B, division A, etc. are displayed simultaneously; ***dynamic*** (Kruk, [0134]), where "real-time" inherently shows dynamic.

Honarvar further discloses ***overall optimization of all process parameters*** (Honarvar, col. 5 line 11-14 and col. 5 line 61-62).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

Neither Kruk nor Honarvar but Bowman in an analogous art discloses ***spider diagram*** (Bowman, Fig. 69 and [0374]), where the "radar plot" is the spider diagram as claimed.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Bowman into the

combination of devices of Kruk and Honarvar. The modification would be obvious because one of the ordinary skill in the art would want to provide a diagram where the user can change the order of the layers by selecting an item in the legend (Bowman, [0374]).

12. Claim 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Own Admission (hereinafter "AOA"), in view of US 20030120528 to Kruk (hereinafter "Kruk"), further in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar").

As per claim 32, AOA substantially discloses:

- ***An MES (manufacturing execution system) device, wherein the MES device is connected between an enterprise and production planning system and a monitoring and control system*** (AOA, Background of the invention [0003]).

AOA is silent regarding:

- ***for optimizing processes***
- ***at least an optimization entity for influencing at least a process parameter***
- ***at least a monitoring entity for monitoring entity for monitoring the process parameter***
- ***at least an evaluation entity for determining an optimization of the process parameter, wherein the optimization is effected by the optimization entity***

However, Kruk in an analogous art discloses:

- ***for optimizing processes*** (Kruk, [0120]);

- ***at least an optimization entity for influencing at least a process parameter*** (Kruk, [0120]), where "which products and/or services to purchase from which suppliers" is the optimization entity as claimed.
- ***at least a monitoring entity for monitoring entity for monitoring the process parameter*** (Kruk, [0009]);
- ***at least an evaluation entity for determining an optimization of the process parameter, wherein the optimization is effected by the optimization entity*** (Kruk, [0120] and [0181]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Kruk into the device of AOA. The modification would be obvious because one of the ordinary skill in the art would want to reduce expenses while generating revenue growth (Kruk, [0003]).

Neither AOA nor Kruk but Honarvar in an analogous art discloses ***automatically determining an optimization*** (Honarvar, abstract and col. 10 line 22-25).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the combination of devices of AOA and Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

As per claim 33, the rejection of claim 32 is incorporated, AOA further discloses the enterprise and production planning system is an ERP (enterprise

resource planning) device, and wherein the monitoring and control system is a PLT (process instrumentation and control) device (AOA, Background of the invention [0003]).

13. Claim 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Own Admission (hereinafter "AOA"), in view of US 20030120528 to Kruk (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), further in view of US 20030088456 to Ernest et al. (hereinafter "Ernest").

As per claim 34, the rejection of claim 32 is incorporated, AOA further discloses monitoring and control system (AOA, [0003]). Kruk further discloses **process parameter must be optimized** (Kruk, [0120]), **process parameter is influenced by one or more optimization entities** (Kruk, [0120]), **is assigned an evaluation entity such that the optimization which is effected on the relevant process parameter by the corresponding optimization entities can be determined by the evaluation entity** (Kruk, [0181]), **a value which is achieved by the relevant optimization entity can be determined online or in real time** (Kruk, [0181], [0192], and [0194]).

None of AOA, Kruk, or Honarvar but Ernest in an analogous art discloses **ROI (return of investment)** (Ernest, [0010]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Ernest into the

combination of devices of AOA, Kruk and Honarvar. The modification would be obvious because one of the ordinary skill in the art would want to make much more accurate determinations of return on investment (Ernest, [0010]).

As per claim 35, the rejection of claim 32 is incorporated, Kruk further discloses the evaluation entity has at least one evaluation module for determining an value of a respective process parameter, said value is being achieved by a respective optimization entity (Kruk, [0120], [0180] and [0181]), where "which products and/or services to purchase from which suppliers" is the respective optimization entity as claimed.

Honarvar further discloses ***automatically determining an*** (Honarvar, abstract and col. 10 line 22-25).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the combination of devices of AOA and Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

None of AOA, Kruk, or Honarvar but Ernest in an analogous art discloses ***ROI (return of investment)*** (Ernest, [0010]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Ernest into the combination of devices of AOA, Kruk and Honarvar. The modification would be obvious

because one of the ordinary skill in the art would want to make much more accurate determinations of return on investment (Ernest, [0010]).

As per claim 36, the rejection of claim 32 is incorporated, AOA further discloses MES device (AOA, Background of the invention [0003]). Kruk further discloses ***all evaluation entities are connected to an overall evaluation entity, such that the effected overall optimization of all process parameters can be determined by the overall evaluation entity*** (Kruk, [0178], Fig. 15 element 602, [0192], and [0195]), ***can be determined online or in real time*** (Kruk, [0181], [0192], and [0194]).

Honarvar further discloses ***overall optimization of all process parameters*** (Honarvar, col. 5 line 11-14 and col. 5 line 61-62); ***overall value of the*** (Honarvar, col. 5 line 11-14 and col. 5 line 61-62).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the combination of devices of AOA and Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

None of AOA, Kruk, or Honarvar but Ernest in an analogous art discloses ***ROI (return of investment)*** (Ernest, [0010]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Ernest into the combination of devices of AOA, Kruk and Honarvar. The modification would be obvious

because one of the ordinary skill in the art would want to make much more accurate determinations of return on investment (Ernest, [0010]).

14. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Own Admission (hereinafter "AOA"), in view of US 20030120528 to Kruk (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), in view of US 20030088456 to Ernest et al. (hereinafter "Ernest"), further in view of US 20030061225 to Bowman et al. (hereinafter "Bowman").

As per claim 37, the rejection of claim 32 is incorporated, AOA further discloses the MES device (AOA, Background of the invention [0003]). ***Kruk further discloses the display entity displays the values which have been achieved by the relevant optimization entities*** (Kruk, [0178], Fig. 15 element 602, [0191], [0192], [0194] and [0195]); ***display simultaneously*** (Kruk, Fig. 15), where the savings for supplier A, supplier B, division A, etc. are displayed simultaneously; ***dynamic*** (Kruk, [0134]), where "real-time" inherently shows dynamic.

Honarvar further discloses ***overall value of the*** (Honarvar, col. 5 line 11-14 and col. 5 line 61-62).

None of AOA, Kruk, or Honarvar but Ernest in an analogous art discloses ***ROI (return of investment)*** (Ernest, [0010]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Ernest into the

combination of devices of AOA, Kruk and Honarvar. The modification would be obvious because one of the ordinary skill in the art would want to make much more accurate determinations of return on investment (Ernest, [0010]).

None of AOA, Kruk, Honarvar, or Ernest but Bowman in an analogous art discloses **spider diagram** (Bowman, Fig. 69 and [0374]), where the "radar plot" is the spider diagram as claimed.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Bowman into the combination of devices of AOA, Kruk, Honarvar, and Ernest. The modification would be obvious because one of the ordinary skill in the art would want to provide a diagram where the user can change the order of the layers by selecting an item in the legend (Bowman, [0374]).

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON LIN whose telephone number is (571)270-3175. The examiner can normally be reached on Monday - Friday 9:30 a.m. - 6:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571)272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JASON LIN/

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/Albert DeCady/

Supervisory Patent Examiner, Art Unit 2121